Memorandum, February 4, 1916

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February 4, 1916. MEMORANDUM RE CURTISS MACHINE.

On Thursday, the 3rd instant, while in Buffalo, the writer (Mr. Kerkam) visited the works of the Curtiss Aeroplane Co. and had an extended conference with Mr. John F. Tarbox, their "technical engineer" and patent attorney. He also was shown over the works and made as careful an examination as possible, particularly with the A. E. A. patents in mind.

He was informed that Mr. Curtiss, Mr. Genung (Vice-President and General Manager), and Judge Wheeler were absent, and, accordingly, Mr. Tarbox acted as his guide.

Inquiry developed that the second Wright suit was still pending, but that no testimony had been taken, and Mr. Tarbox ventured the opinion that no testimony would be taken in the near future. He stated that the construction that they were now manufacturing employed ailerons arranged on either side of the medial fore and aft line of the machine and normally at a zero angle of incidence, but that these ailerons were not simultaneously or reversely operated, but that only the aileron on the high side of the machine was actuated when it was desired to maintain or restore equilibrium. Stops were provided, he said, on which the ailerons rested to prevent them from being reversely operated; that is to say, when the aileron on the high side of the machine was actuated, to prevent the aileron on the low side of the machine from being operated reversely. Aside from the provision of these stops, he stated that no reverse action would take place because the connections between the ailerons and the shoulder yoke (or the wheel which is employed in some types of the Curtiss machines for foreign use) omitted the lower wires; and that a single upper wire extended from the aileron on one side to the shoulder yoke or wheel, and a single upper wire from the aileron on the other side to the shoulder yoke or wheel. He further stated

that means were provided to prevent the steering 2 rudder from being actuated when the ailerons were operated to restore or maintain equilibrium.

Mr. Tarbox stated that there was not a complete machine at the Curtiss plant and that no assembling was being done there. The various parts of the machines were shipped from the factory, so he stated, without testing. He stated that, so far as the foreign machines were concerned (and the activities of the Company at this time seemed to be quite taken up with these), the ailerons were put on the machines after they reached the other side. He did not know, so he said, whether the ailerons when they were placed on the machines abroad had the reverse connection between them, or whether the connections were such that only the aileron on the high side of the machine was actuated.

In response to the writer's comment that the operation of the aileron on the high side of the machine (without the simultaneous actuation of the vertical rudder) would cause the machine to swerve, Mr. Tarbox stated that they “let her swerve”. He stated that no criticisms or complaints had been made in this connection and that the aviators seemed to secure quite as successful results in this connection as they did with the Wright or other machines.

With respect to the above, it is noted that claim 1 of the A. E. A. patent N o 1,011,106 requires

(1) a supporting surface having a positive angle of incidence;

(2) a pair of lateral balancing rudders—

(a) one on each side of the medial fore and aft line of the structure; and

(b) each of said rudders normally having a zero angle of incidence; and

(3) connections between said rudders.

This claim clearly reads on the Curtiss disclosure as developed in the conference with Mr. Tarbox, except with respect to the last requirement of “connections between said 3 rudders”. It is true that the two ailerons are connected to the wheel or yoke by which they are operated, and so, in a way, there are “connections between said rudders”; but the connections that are described in our patent specification are connections such that the movement of one aileron will be transmitted to the aileron on the other side of the machine. Such “connections” the Curtiss machine does not possess, according to Mr. Tarbox. In view of the fact that we did not see a Curtiss machine at Buffalo and were therefore unable to verify the statements of Mr. Tarbox, we are not satisfied that the information given us is entirely correct. Mr. Tarbox may be mistaken in some respects and we suggest the advisability of inspecting one of the Curtiss flying boats such as illustrated on page 802 of the January 1916 issue of “Flying” (Vol. 4, N o 12), and the “Curtiss Military Tractor” such as illustrated on page 482 of the issue of January 31, 1916 of the “Aerial Age” (Vol. 2, N o 20).

Aside from this question of the actuation of the ailerons, we would like to examine specimens of the two Curtiss machines referred to in connection with the control mechanism required by claims 22 and 23 of the A. E. A. patent above indicated. We were unable to definitely ascertain whether or not this control mechanism was embodied in any of the Curtiss structures.

Mr. Tarbox advised us that the training school of the Curtiss Co. is located at Newport News, Va., and that they are now flying at that place. He states that it is much too cold to do any flying at Buffalo during the winter season.